



# iPhone 5s Bluetooth and Wi-Fi Antenna Replacement

How to replace the bluetooth and wi-fi antenna in an iPhone 5s.

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## INTRODUCTION

Weak signal? Having trouble connecting to devices? You may need to replace the wi-fi/bluetooth antenna in your iPhone 5s.



### TOOLS:

- [Phillips #000 Screwdriver](#) (1)
- [iFixit Opening Tools](#) (1)
- [Suction Handle](#) (1)
- [iSlack](#) (1)
- [Spudger](#) (1)
- [SIM Card Eject Tool](#) (1)
- [SIM Card Eject Tool](#) (1)
- [2.5 mm Flathead Screwdriver](#) (1)
- [Tweezers](#) (1)
- [Utility Scissors](#) (1)
- [P2 Pentalobe Screwdriver iPhone](#) (1)
- [Utility Scissors](#) (1)



### PARTS:

- [iPhone 5s/SE Bluetooth and Wi-Fi Antenna](#) (1)

## Step 1 — Taping the display glass




- If your display glass is cracked, keep further breakage contained and prevent bodily harm during your repair by taping the glass.
- Lay overlapping strips of clear packing tape over the iPhone's display until the whole face is covered.
  - ⓘ This will keep glass shards contained and provide structural integrity when prying and lifting the display.

 Wear safety glasses to protect your eyes from any glass shaken free during the repair.

## Step 2 — Removing the Pentalobe screws



 Before you proceed, discharge your iPhone battery below 25%. A charged lithium-ion battery can catch fire and/or explode if accidentally punctured.

- Power off your iPhone before beginning disassembly.
- Remove the two 3.9 mm Pentalobe screws from either side of Lightning connector.

## Step 3 — How to use the iSclack



- i** In the following steps you will be pulling the display up out of the phone body. The display is composed of a glass screen and a plastic bezel with metal clips.
- Regardless of the tool you use, **you need to be sure you pull up the entire display**.
  - If the glass begins to separate from the plastic, as shown in the first image, slide a plastic opening tool between the plastic frame and the metal phone body to pry the metal clips out of the case.
- ★** If you are reassembling a phone with a separated display bezel, you may want to place a thin strip of adhesive between the plastic bezel and the glass to keep the phone closed.



## Step 4 — Starting the iSclack Opening Procedure



**i** The next two steps demonstrate using the [iSclack](#), a great tool for safely opening the iPhone that we recommend for anyone doing more than one repair. **If you aren't using the iSclack, skip the next two steps.**

- Close the handle on the iSclack, opening the suction-cup jaws.
- Place the bottom of your iPhone in between the suction cups, against the plastic depth gauge.
  - The top suction cup should rest just above the home button.
- Open the handles to close the jaws of the iSclack. Center the suction cups and press them firmly onto the top and bottom of the iPhone.

## Step 5 — Finishing the iSclack Opening Procedure



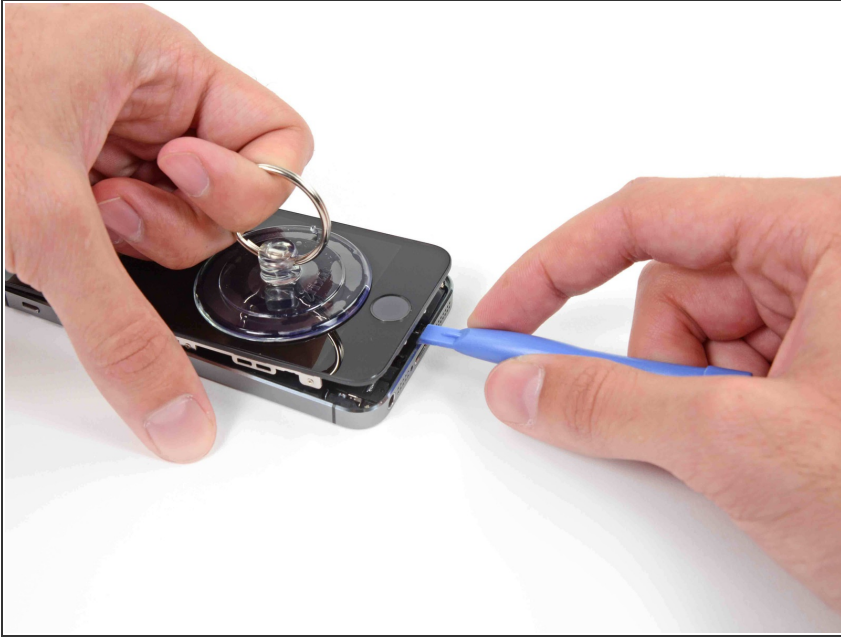
- Hold onto your iPhone securely and close the handle of the iSclack to separate the suction cups, pulling the front panel up from the rear case.
- The iSclack is designed to safely open your iPhone just enough to separate the pieces, but not enough to damage the home button cable.
- ⓘ Peel the two suction cups off your iPhone.
- **Skip the next three steps and continue on Step 9.**


## Step 6 — Manual Opening Procedure




- If you don't have an iSlack, use a single suction cup to lift the front panel:
- Press a suction cup onto the screen, just above the home button.
- ⓘ Be sure the cup is completely on the screen to get a tight seal.


## Step 7 — Start lifting the front panel assembly



 The front panel is attached with clips, and there are several ribbon cables connecting it to the rest of the phone. Your goal here is to release the clips and **open the phone only enough to disconnect the cables**. Go slowly and carefully to avoid damage.

 Make sure the suction cup is firmly attached to the front panel assembly near the home button.


- While holding the iPhone down with one hand, pull up on the suction cup to slightly separate the home button end of the front panel from the rear case.
- With a plastic opening tool, gently pry the edges of the rear case down, away from the front panel assembly, while you pull up with the suction cup.

 Take your time and apply firm, constant force. The 5s front panel assembly is a much tighter fit than most devices.



## Step 8




 Do not try to completely remove the front panel assembly from the rear case, as there are several delicate ribbon cables connecting them.


- Pull the plastic nub to release the vacuum seal on the suction cup.
- Remove the suction cup from the display assembly.

## Step 9 — Removing the Touch ID cable bracket

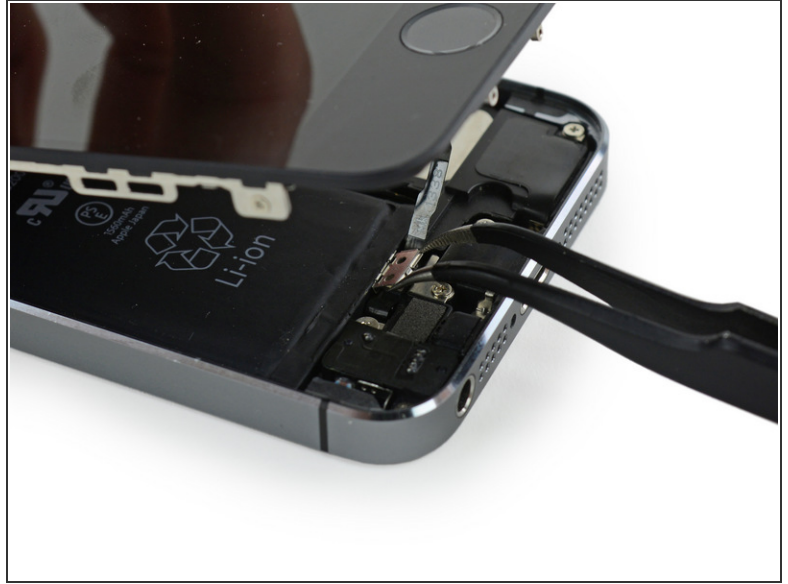
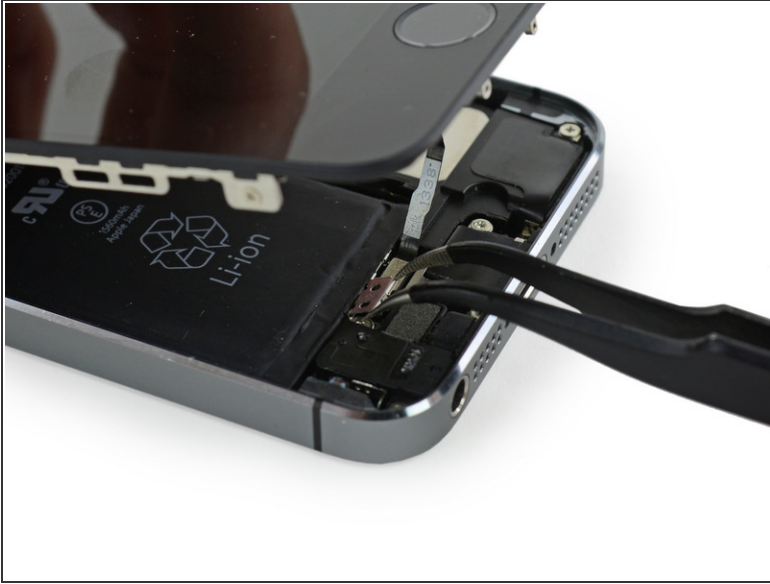




- Open the phone just enough to reveal the metal bracket covering the home button cable.

 Do not open the phone too far or you risk damaging the home button cable, or the socket it plugs into. **Keep the cable loose—if it is stretched taut, that's too far.**

- Only the phone's original home button assembly will be capable of using the Touch ID functionality. **If you rip the cable, installing a new home button will only restore ordinary home button functions, not the Touch ID features.**
  - Use the tip of a spudger to push the bracket free and remove it with tweezers.
-  The next two steps apply to reassembly. Skip them and continue to Step 12 until reassembly.

## Step 10



-  During reassembly, you will need to reinstall the Touch ID cable bracket. The top of the bracket needs to slide between the battery and Touch ID cable connector, and the front must latch down over the connector.
-  Slide the top of the bracket over the Touch ID cable connector from left to right.

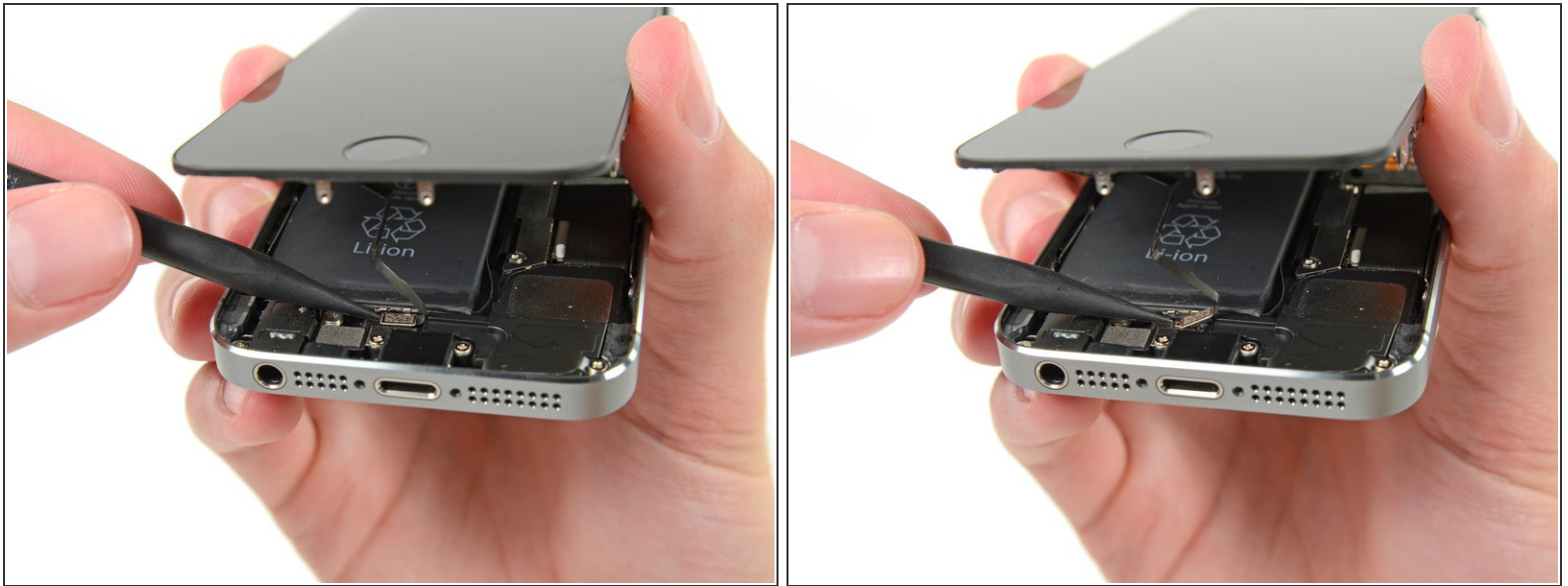
## Step 11




- Use the flat end of a spudger to snap the front portion of the Touch ID cable bracket down over the cable connector.
- ⓘ If the bracket does not snap down flush, you may need to remove the bracket and slide it over the cable connector again for a better fit.



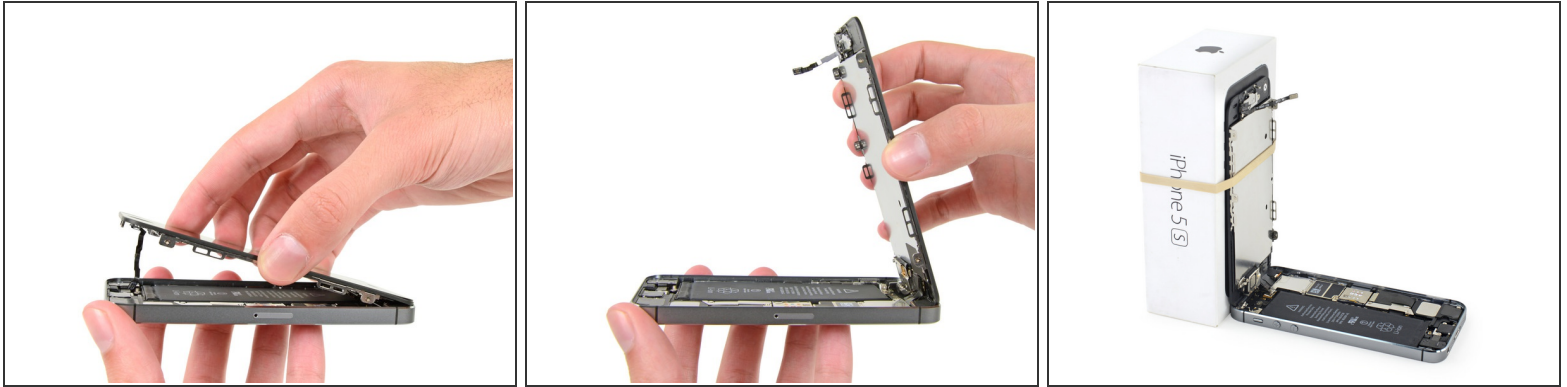
## Step 12 — Disconnecting the home button cable connector



- Use the tip of a spudger to pry the home button cable connector up out of its socket.

 Be sure you're separating the cable connector from its socket, and not prying the entire socket up. The socket is on its own glued-down cable that can be pried up if you aren't careful.

## Step 13 — Opening up the phone



- Once the connector has been released, pull the home button end of the assembly away from the rear case, using the top of the phone as a hinge.
- Open the display to about a 90° angle, and lean it against something to keep it propped up while you're working on the phone.
  - Add a rubber band to keep the display securely in place while you work. This prevents undue strain on the display cables.
- ❗ In a pinch, you can use an unopened canned beverage to hold the display.

## Step 14



- Remove the two 1.6 mm Phillips #000 screws securing the metal battery connector bracket to the logic board.

## Step 15



- Remove the metal battery connector bracket from the iPhone.

## Step 16



- Use the flat end of a spudger to gently pry the battery connector up from its socket on the logic board.



Be very careful to only pry up on the battery connector itself and not the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.



## Step 17



- Remove the following screws securing the front panel assembly cable bracket to the logic board:
  - One 1.7 mm Phillips #000 screw
  - One 1.2 mm Phillips #000 screw
  - One 1.3 mm Phillips #000 screw
  - One more 1.7 mm Phillips #000 screw
- ⓘ This 1.7 mm screw tends to not be attracted to a magnetized screwdriver. Take care not to lose it when removing.

⚠ It is especially important to keep track of your screws in this step for reassembly. Accidentally using the 1.3 mm screw or one of the 1.7 mm screws in the bottom right hole will result in significant damage to the logic board causing the phone to no longer boot properly.

⚠ Be careful not to over-tighten the screws, and don't force them. If they don't fit easily when you are securing them, they may be the wrong size.

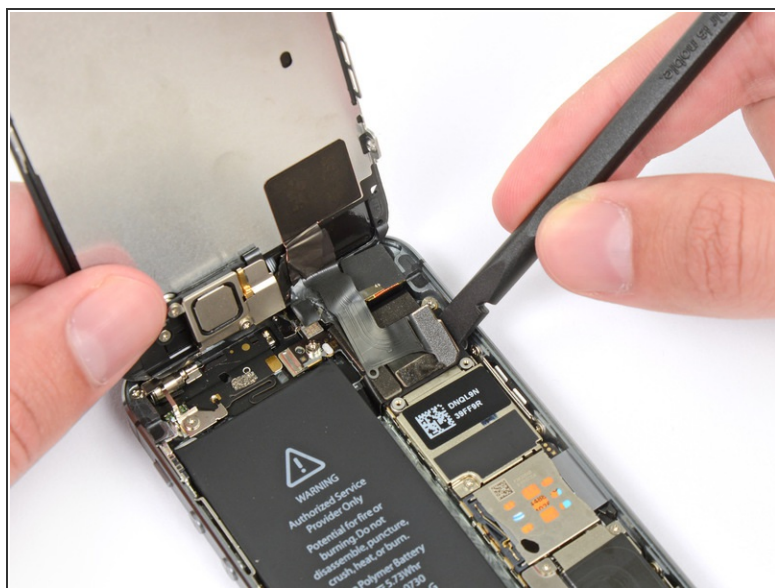
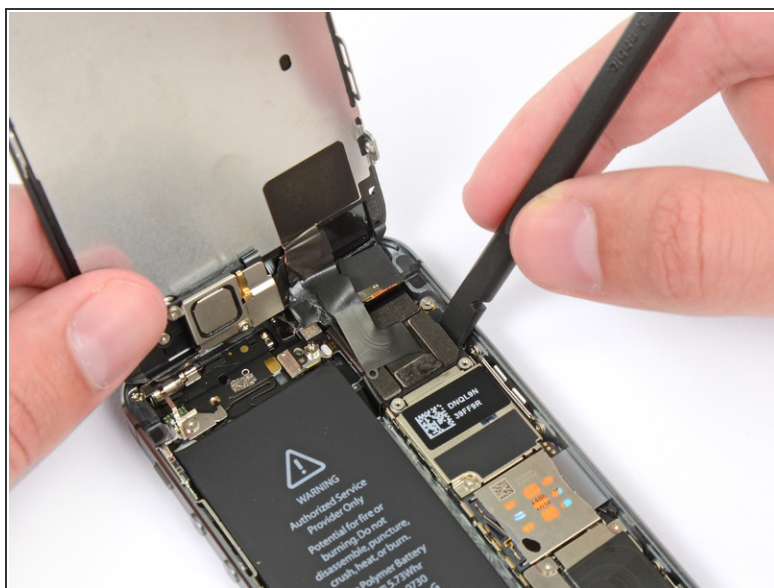


## Step 18



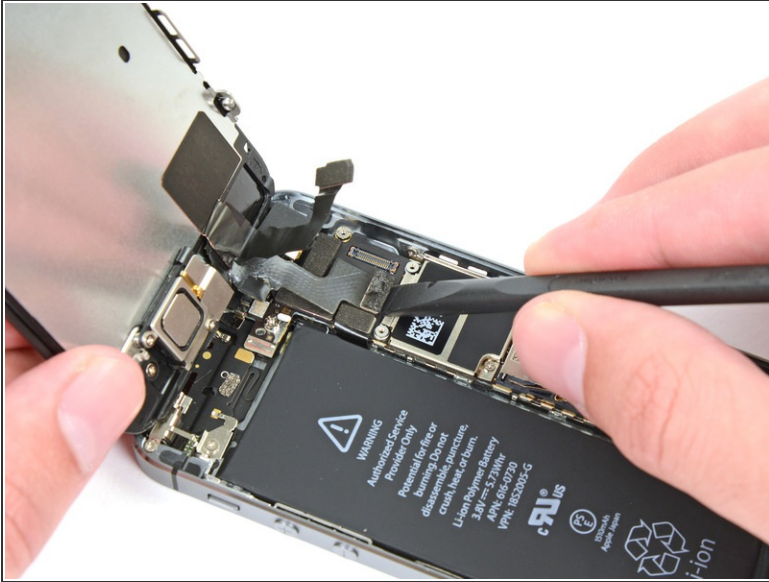
- Remove the front panel assembly cable bracket from the logic board.

## Step 19



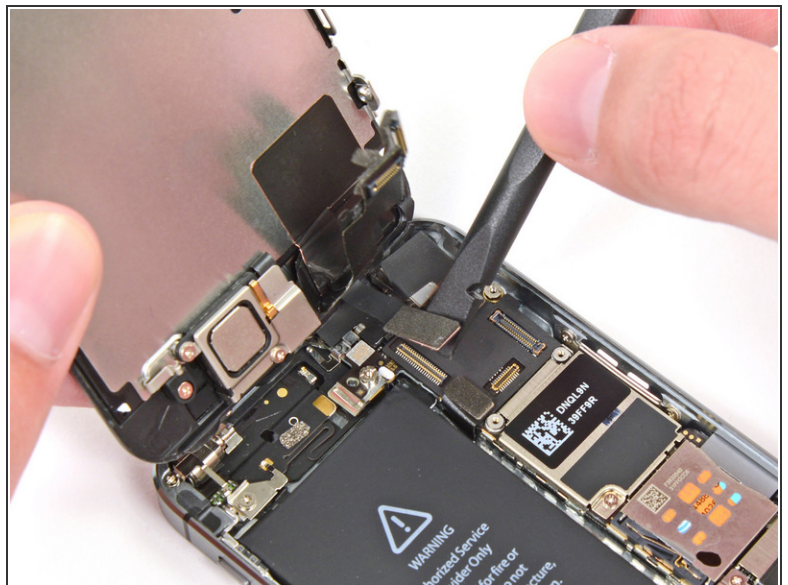
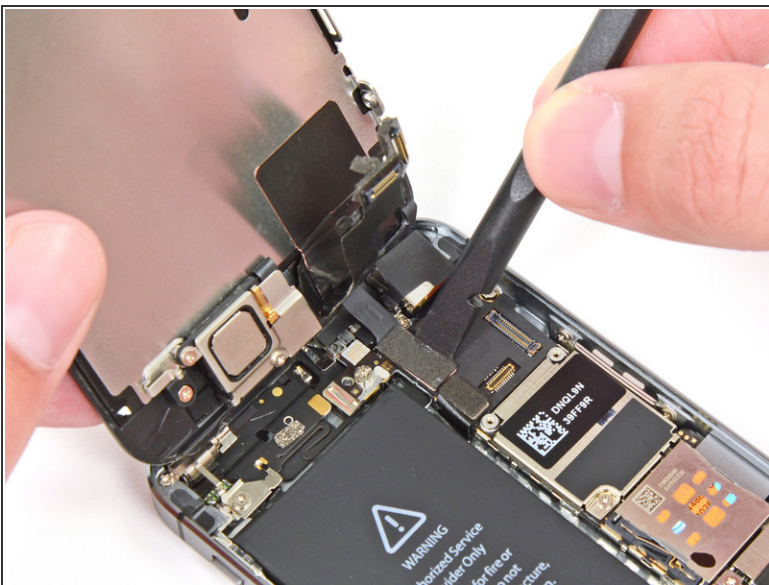
- Use the flat end of a spudger to disconnect the front-facing camera and sensor cable.

## Step 20



- While still supporting the front panel, disconnect the LCD cable connector.
- ✦ When reassembling your phone, the LCD cable may pop off the connector. This can result in white lines or a blank screen when powering your phone back on. If that happens, simply reconnect the cable and power cycle your phone. The best way to power cycle your phone is to disconnect and reconnect the battery.

## Step 21



- Finally, disconnect the digitizer cable connector.



## Step 22



- Remove the front panel assembly from the rear case.

## Step 23 — SIM Card



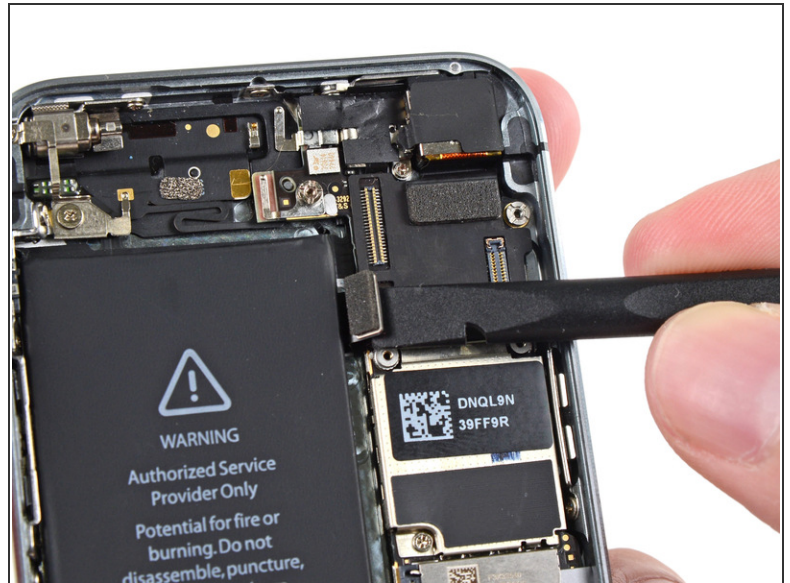
- Insert a SIM card eject tool or a paperclip into the small hole in the SIM card tray.
- Press to eject the tray. This may require a significant amount of force.

## Step 24



- Remove the SIM Card tray assembly from the iPhone.
- ☑ When reinserting the SIM card, ensure that it is in the proper orientation relative to the tray.

## Step 25 — Logic Board



- Use a spudger to gently pry the button assembly cable up from its socket on the logic board.
- ⚠ Be very careful to only pry up on the connector and not the socket on the logic board. If you pry up on the logic board socket, you may break the connector entirely.



## Step 26



- Use a spudger to pry the Lightning connector cable up from its socket on the logic board.
- Fold the Lightning connector cable out of the way of the logic board.

## Step 27



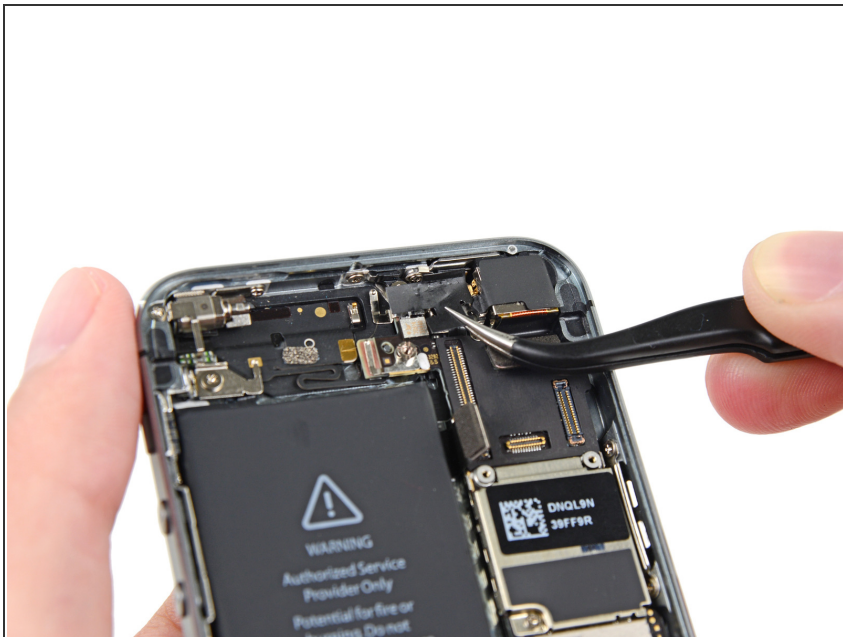
- Use the tip of a spudger to pry the antenna cable up from its socket on the logic board.

## Step 28



- Use the flat end of a spudger to disconnect the rear-facing camera cable from its socket on the logic board.

## Step 29



- Remove any tape covering the camera flash bracket.

## Step 30



- Remove the following screws from the logic board:
  - One 2.4 mm Phillips #000 screw
    - ☑ This screw also holds a small metal contact beneath the logic board. It's held in place underneath a plastic bracket, but if you see it slipping out, refer to [this step](#) to remove it.
  - Two 2.3 mm Phillips #000 screws
  - Four 2.8 mm standoff screws
    - ⓘ Use a small flathead screwdriver to remove these standoff screws.
    - ☑ During reassembly, you can use the tip of a spudger to get the standoff screw started.

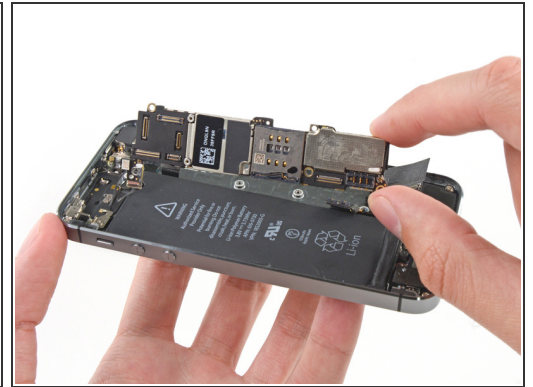
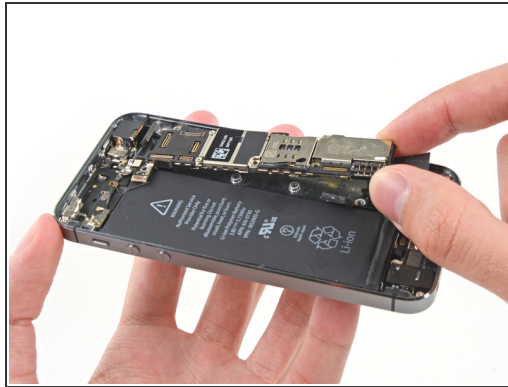


## Step 31



- Use a plastic opening tool to lift the logic board up enough to grab with your fingers.

## Step 32



- Pull the logic board slightly away from the rear facing camera.

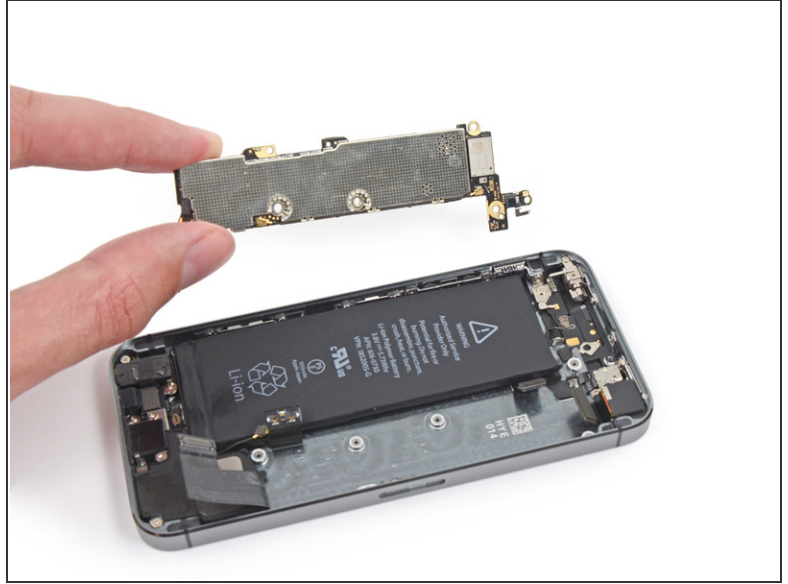
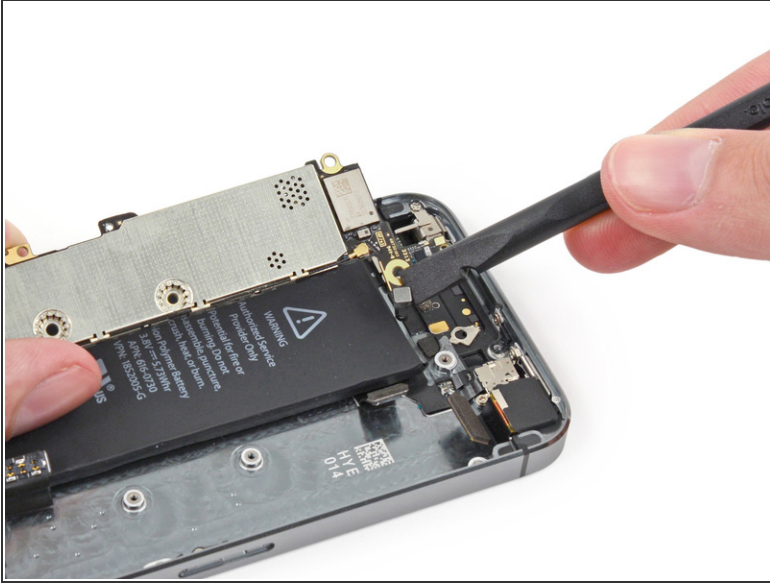


Do not try to remove the logic board just yet, as it is still connected by an antenna cable on the back.

- Flip the logic board toward the battery, as if you are turning the page in a book.

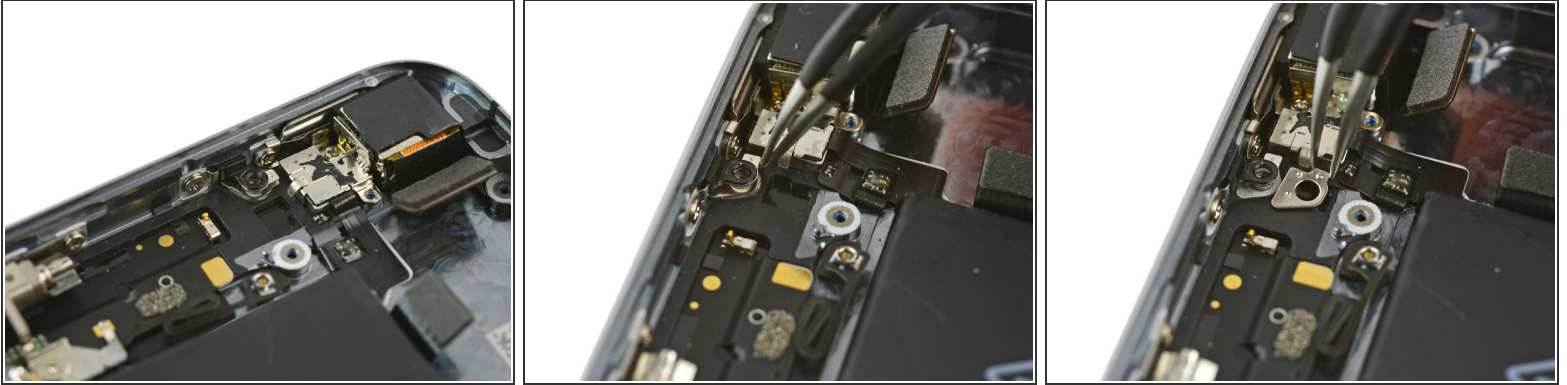


## Step 33



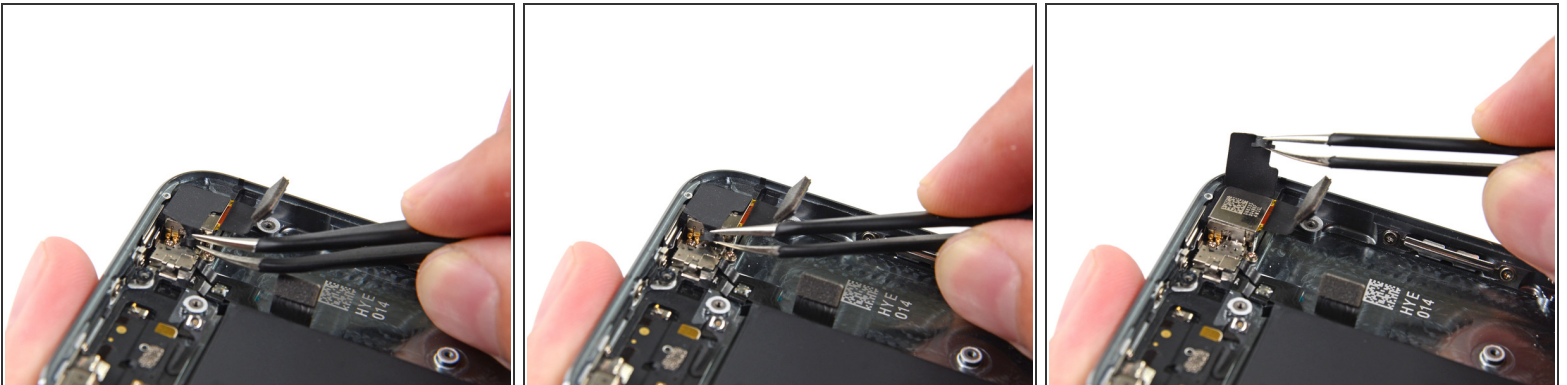
- Use the flat end of a spudger to disconnect the antenna cable on the back of the logic board.
- Remove the logic board from the iPhone.

## Step 34



- At this point, a small metal plate near the rear facing camera is loose and may come free from its recess.
- ⓘ Because it is very small and easy to lose, it's best to remove this plate and set it aside while you continue to work on your phone.
- Use tweezers to remove the plate from beneath the bracket to the left of the rear-facing camera.
- ☑ When reassembling, orient the plate with the small tab to the right and the longest flat edge against the top of the phone.

## Step 35 — Rear Facing Camera



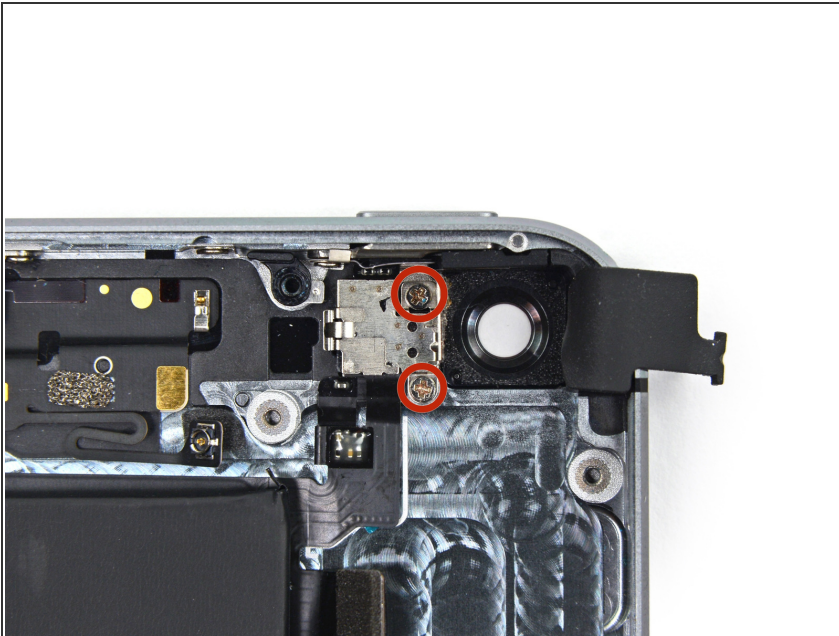
- Using a pair of tweezers, flip the rubber camera cover out of its clip and toward the outside of the rear case.
- ⚠ **Do not** attempt to fully remove this cover. It is attached to the rear case and only needs to be flipped open, not removed.

## Step 36



- Remove the rear-facing camera from the rear case.
- ✦ During reassembly, the camera cable should bend in a 'U' shape to slot in behind the logic board.
- ✦ If the rubber camera bumper has shifted, be sure to replace it before reassembling your iPhone.

## Step 37 — Camera Bracket



- Remove the two 1.6 mm Phillips #000 screws securing the rear-facing camera bracket.

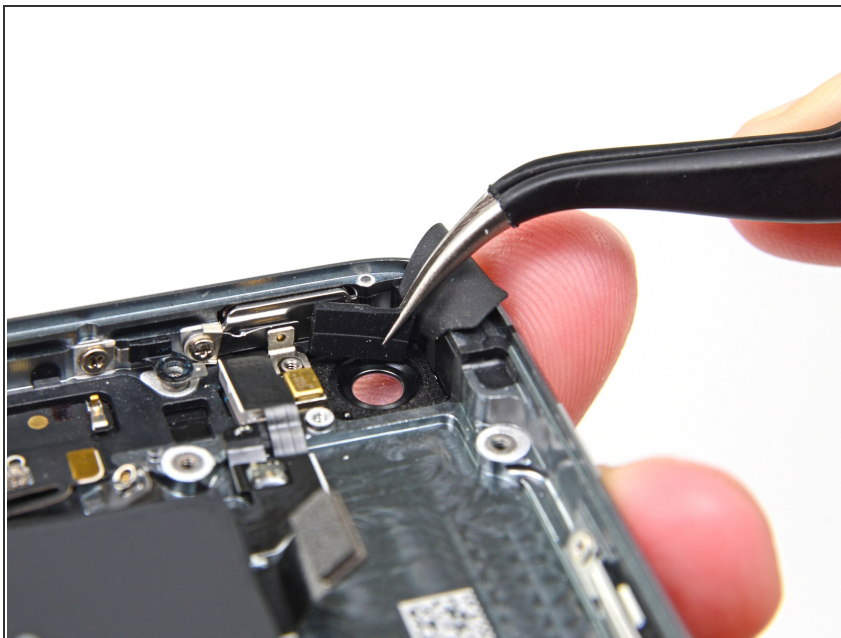


## Step 38



- Remove the rear-facing camera bracket from the rear case.

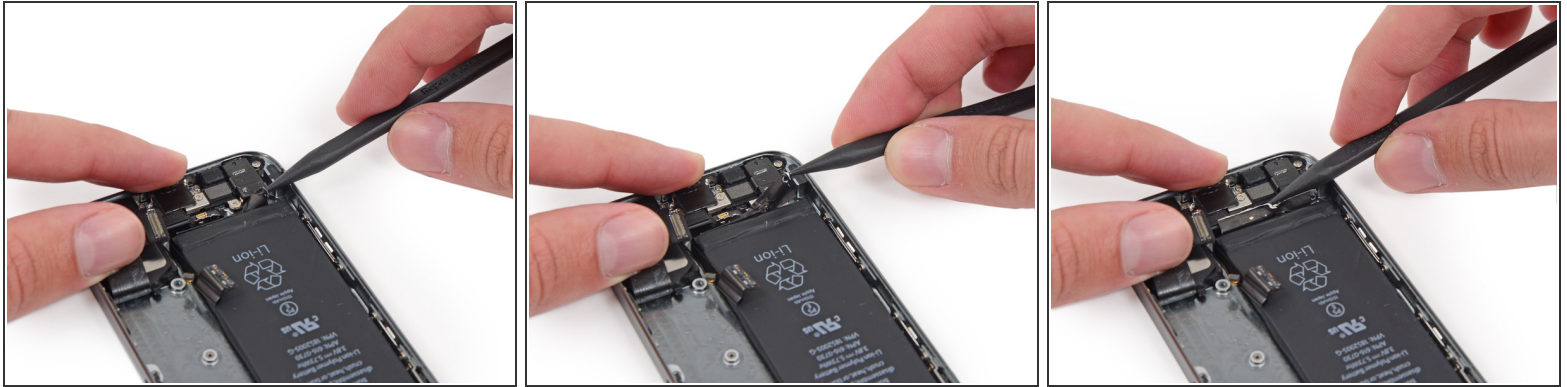
## Step 39



- Remove the rubber camera bumper from the case.



## Step 40 — Battery



- Insert the tip of a spudger into the hole in the battery adhesive tab near the headphone jack.
- Lift the tab up slightly and use the spudger to unfold the tab from its recess.


## Step 41



- Pull the battery adhesive tab straight up from the phone.
- Cut the black battery adhesive tab between the two white adhesive strips, separating them.

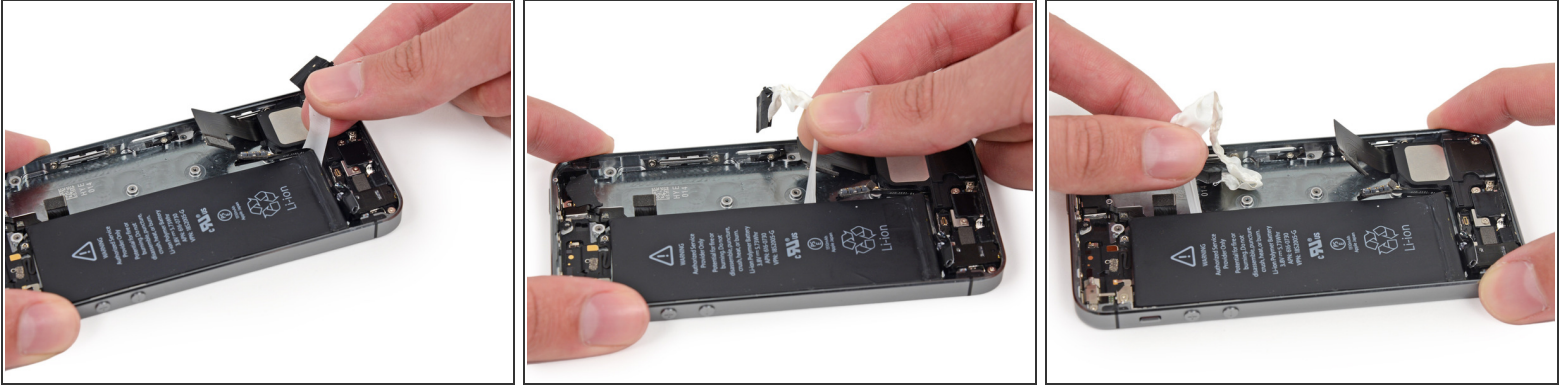
## Step 42




 Try to keep the strips flat and unwrinkled during this procedure; wrinkled strips will stick together and break instead of pulling out cleanly.


- Slowly pull one of the battery adhesive strips away from the battery, toward the bottom of the iPhone.
- Pull steadily, maintaining constant tension on the strip as it slips out from between the battery and the rear case. For best results, pull the strip at a 60° angle or less.

## Step 43

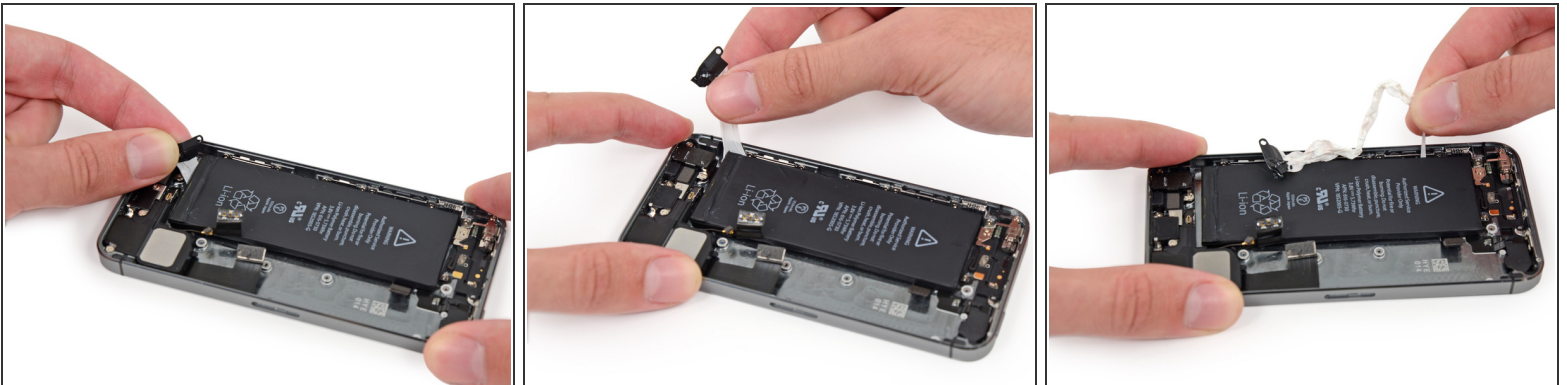


- Guide the strip carefully around the corner and up the side of the battery.


 Be careful not to snag it on the corner of the battery or on any of the other internal iPhone components.

-  The strip will stretch to many times its original length. Continue pulling, re-grabbing the strip near the battery if necessary, until the entire strip comes free.

## Step 44



- Repeat to remove the second adhesive strip.
- If you removed both strips successfully, skip the next two steps.

 If either of the adhesive strips break underneath the battery and cannot be retrieved, try to remove the remaining strip, and then proceed to the next step.



## Step 45



- If any of the adhesive strips broke off and the battery remains stuck to the rear case, [prepare an iOpener](#) or use a hair dryer to heat the rear case directly behind the battery.

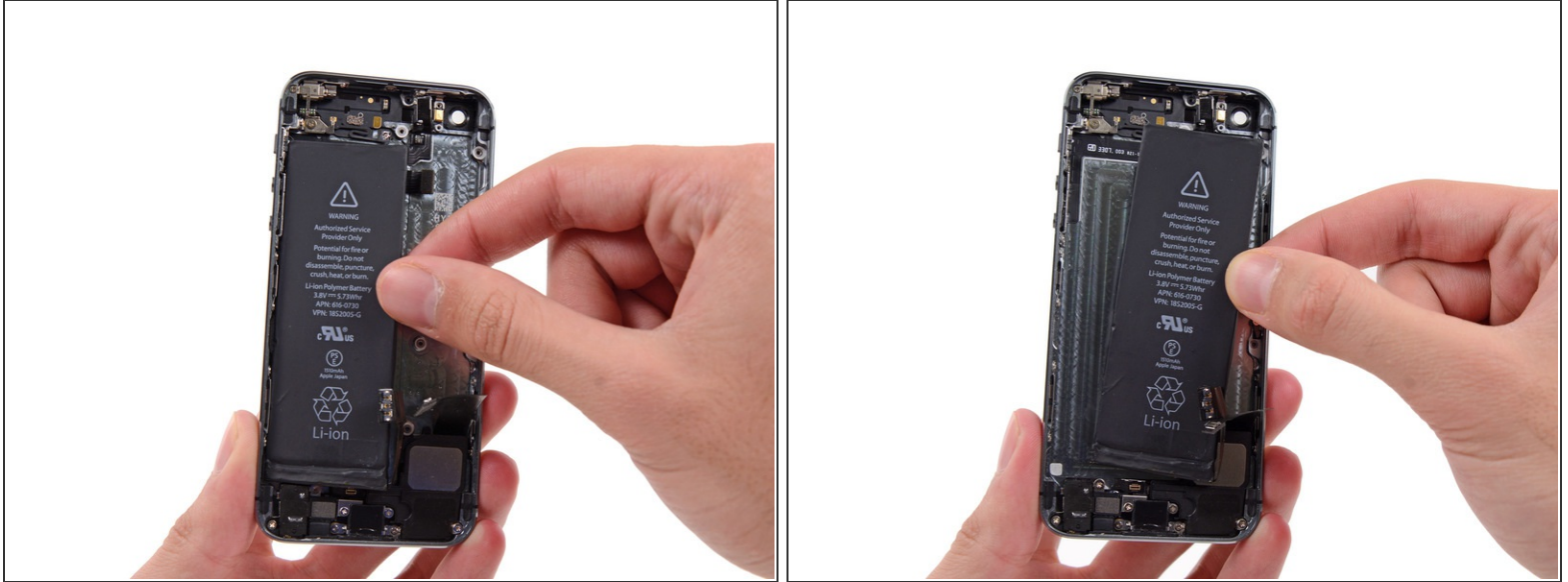
## Step 46



- Flip the iPhone back over and insert a plastic card between the case side of the battery and the rear case.
- ⚠ Be careful to keep the card as flat as possible to avoid bending the battery, which may damage it and cause it to release dangerous chemicals.
- Press the card in farther to break up the adhesive behind the battery.



## Step 47



- Remove the battery from the rear case.

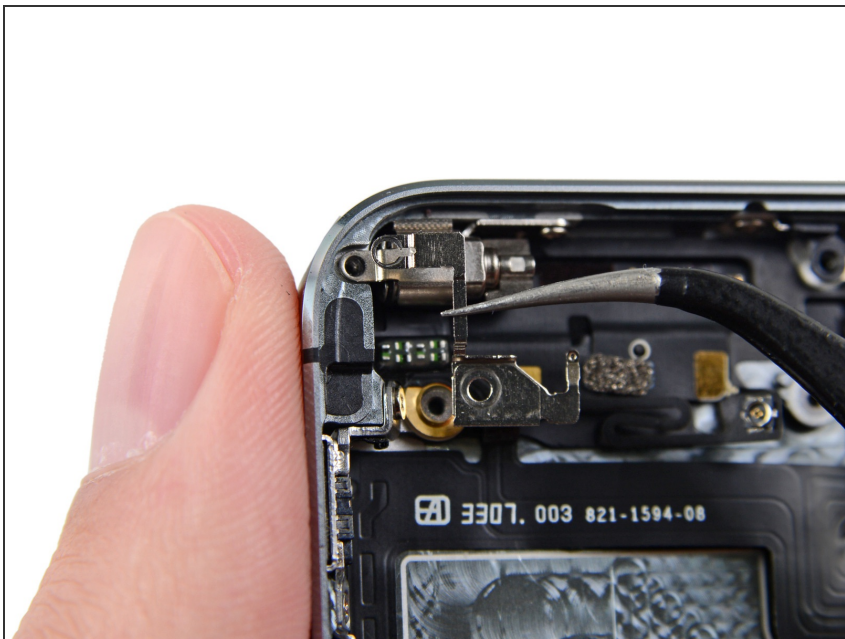
✦ When installing the battery, refer to [this guide](#) to replace your battery's adhesive strips.

## Step 48 — Vibrator



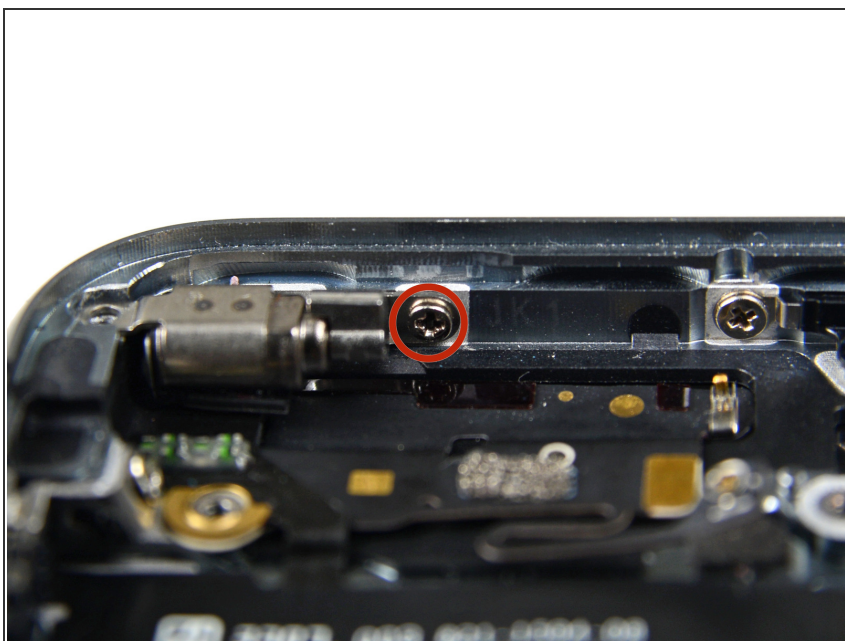
- Remove the following Phillips #000 screws from the vibrator bracket:
  - One 1.7 mm screw
  - One 2.5 mm screw

## Step 49



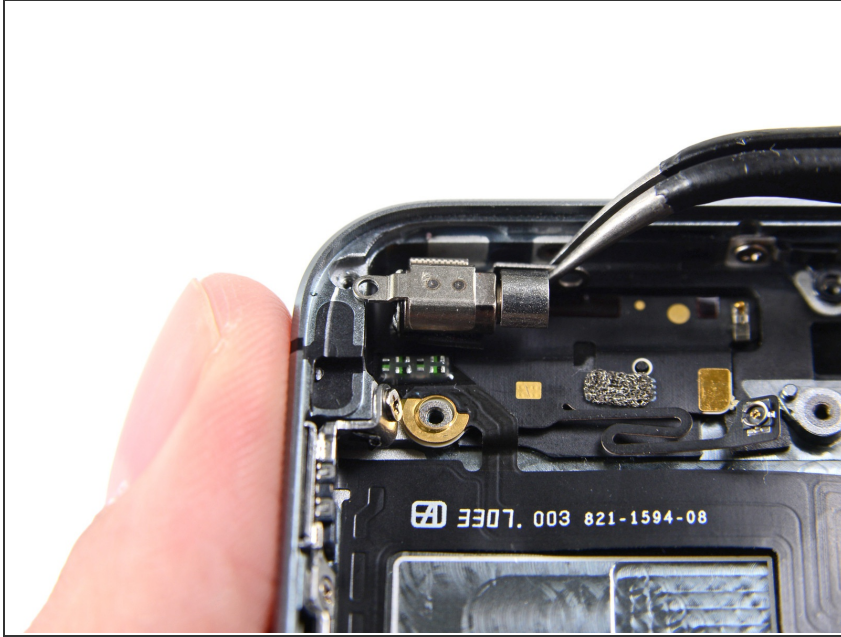
- With a set of tweezers, remove the vibrator bracket.

## Step 50



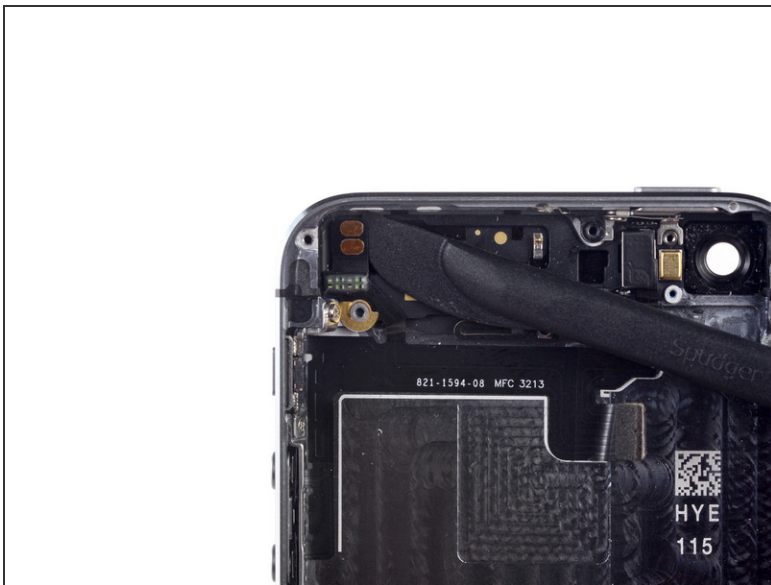
- Remove the 1.7 mm Phillips #000 screw securing the vibrator to the rear case.

## Step 51



- Use a set of tweezers to remove the vibrator from the rear case.

## Step 52 — Bluetooth and Wi-Fi Antenna

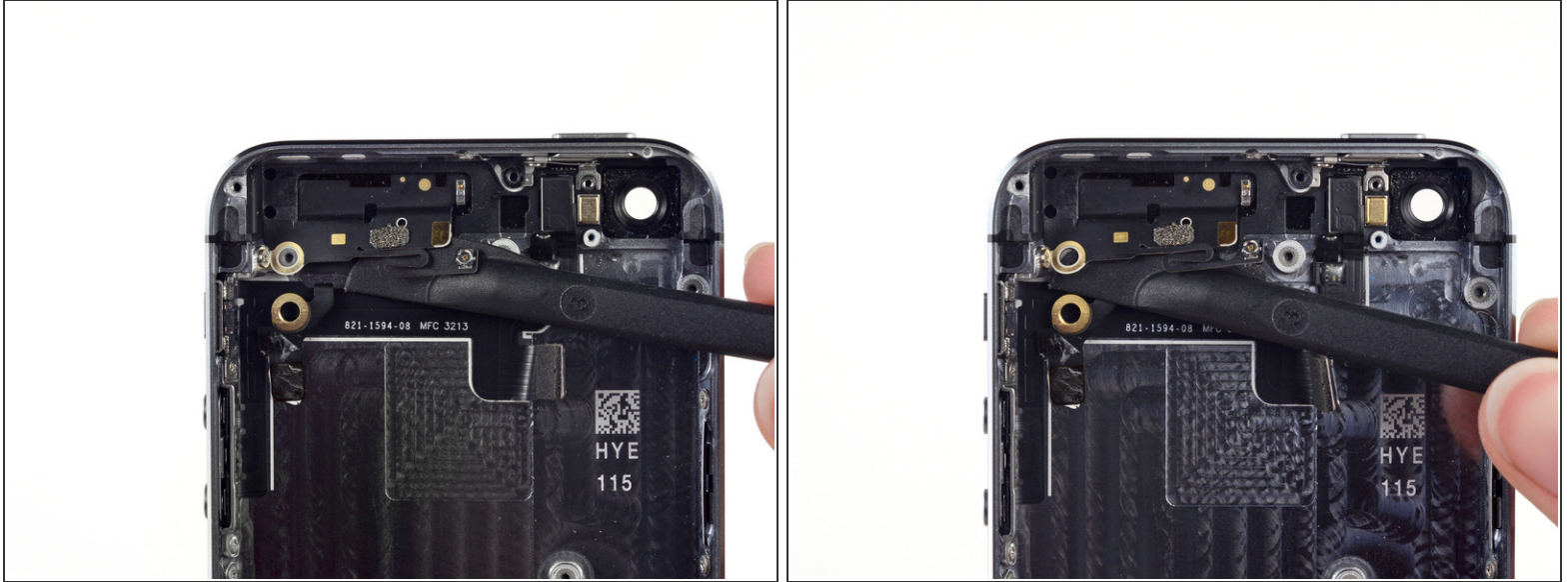


- Gently peel the vibrator contact pad portion of the upper cable assembly off of the bluetooth and wi-fi antenna.

⚠ Take care not to damage this cable, or you may lose vibrator, or other upper component cable functionality.

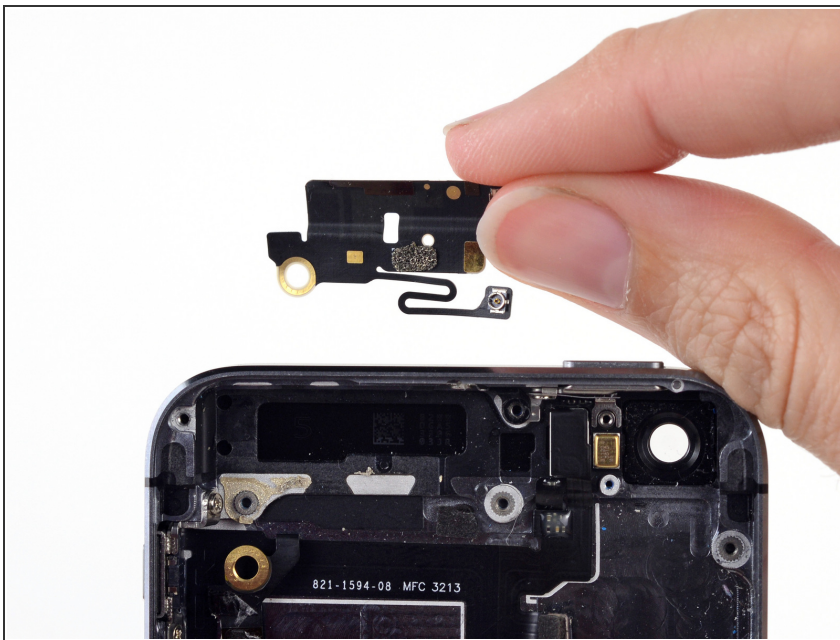


## Step 53



- Carefully pry the bluetooth and wi-fi antenna up off of the adhesive holding it to the rear case.

## Step 54



- Remove the bluetooth and wi-fi antenna.
- ⓘ Be careful not to touch any metal to metal contact points with your bare fingers—use tweezers or gloves. Finger oils may disrupt conductivity. If you do touch any of these components, clean them with a degreaser like windex or isopropyl alcohol before reassembly.

To reassemble your device, follow these instructions in reverse order.



